



# OPERATIONAL RISK MANAGEMENT

“Avoid the distractions of debates on political correctness and focus on the soldiers’ mission, one that remains fixed, determined, inviolable. It is to win our wars.”

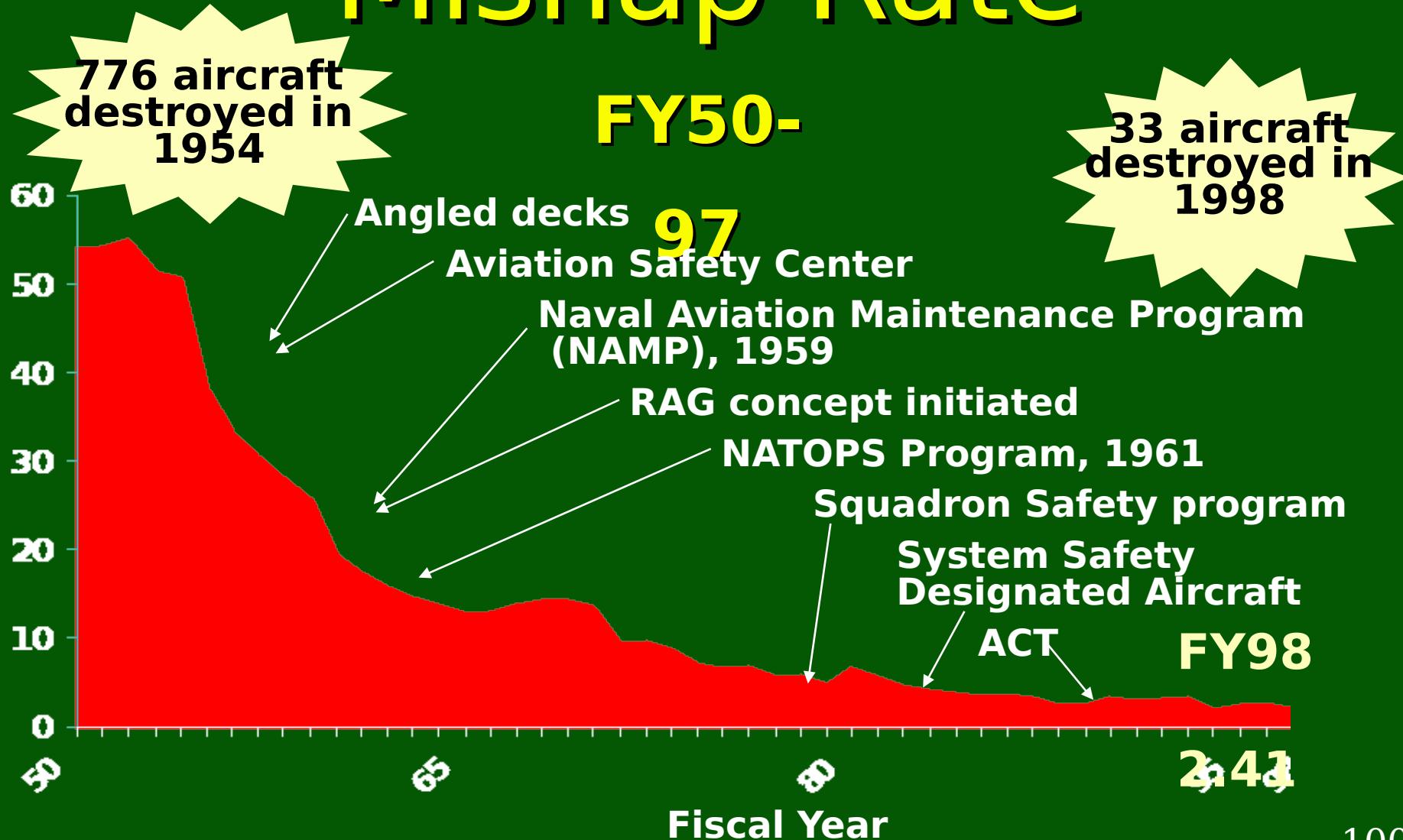
# General Douglas MacArthur      April, 1962

“We’re out of the do more with less business. We can do less with less or we can do more with more, but we will no longer do more with less.”

Johnson  
College  
1995

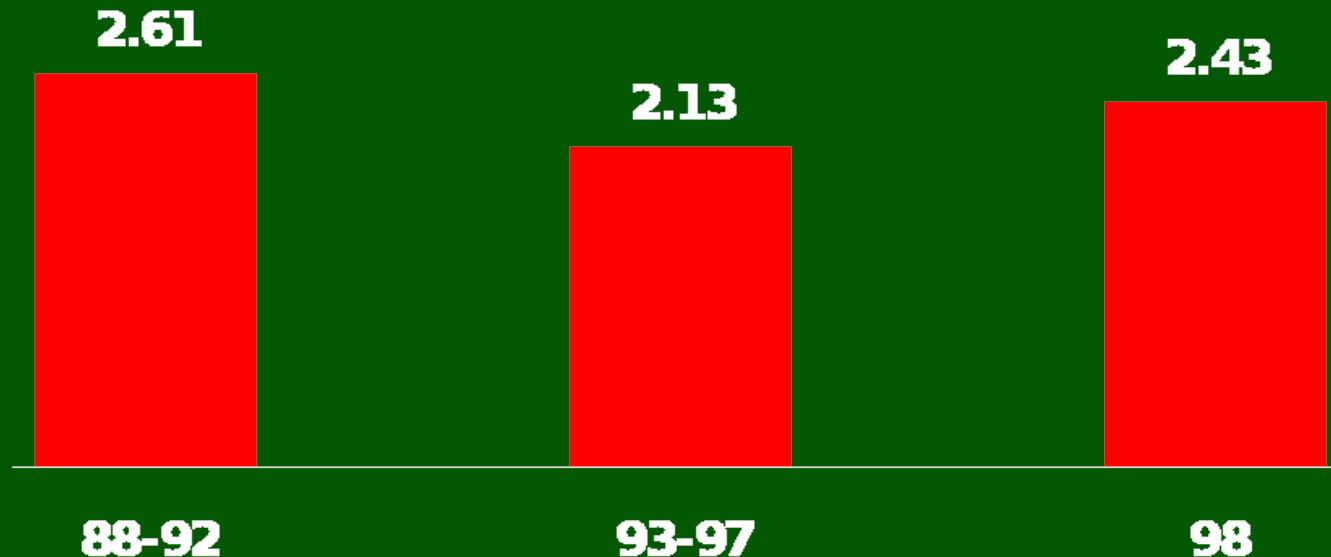
Admiral Jay  
Naval War  
June,

# Naval Aviation Mishap Rate



# Navy & Marine Corps Class A Flight Mishaps

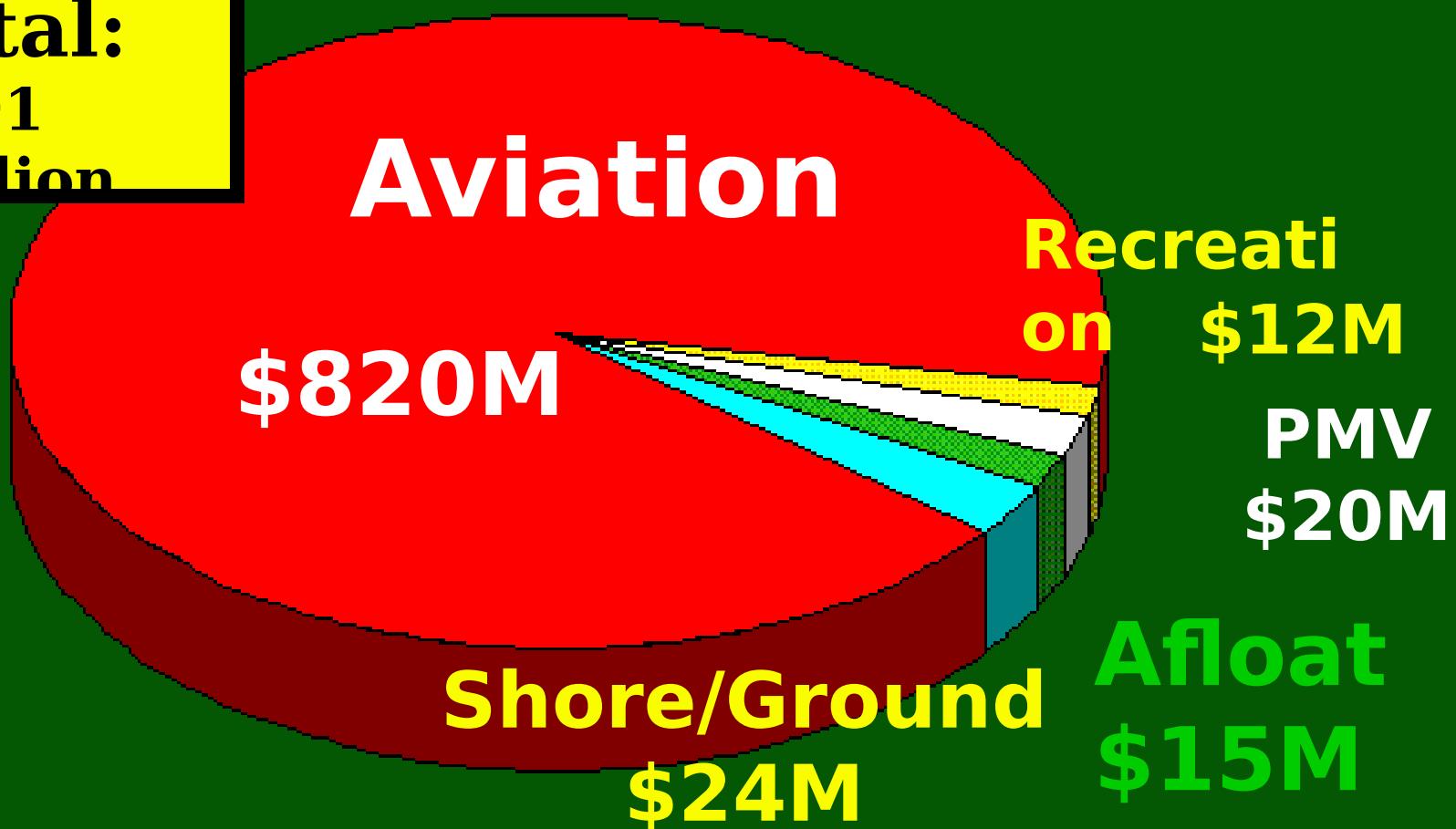
5 year trends indicate a plateau - but FY 98 rate highest since FY 93



# **Cost of Mishaps**

## Navy and Marine Corps, FY98

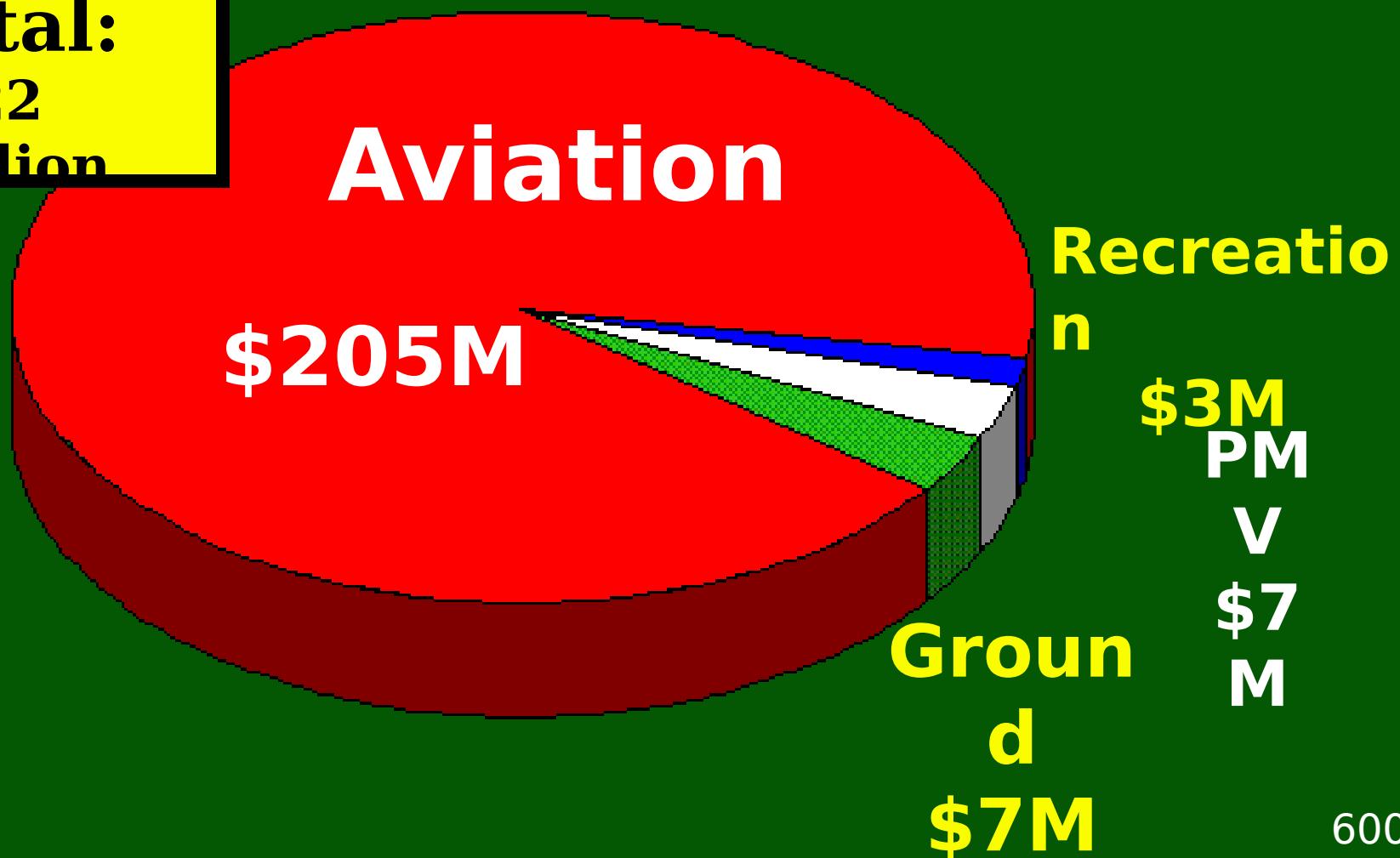
**Total:**  
**\$891**  
**Million**



# Cost of Mishaps

## Marine Corps, FY98

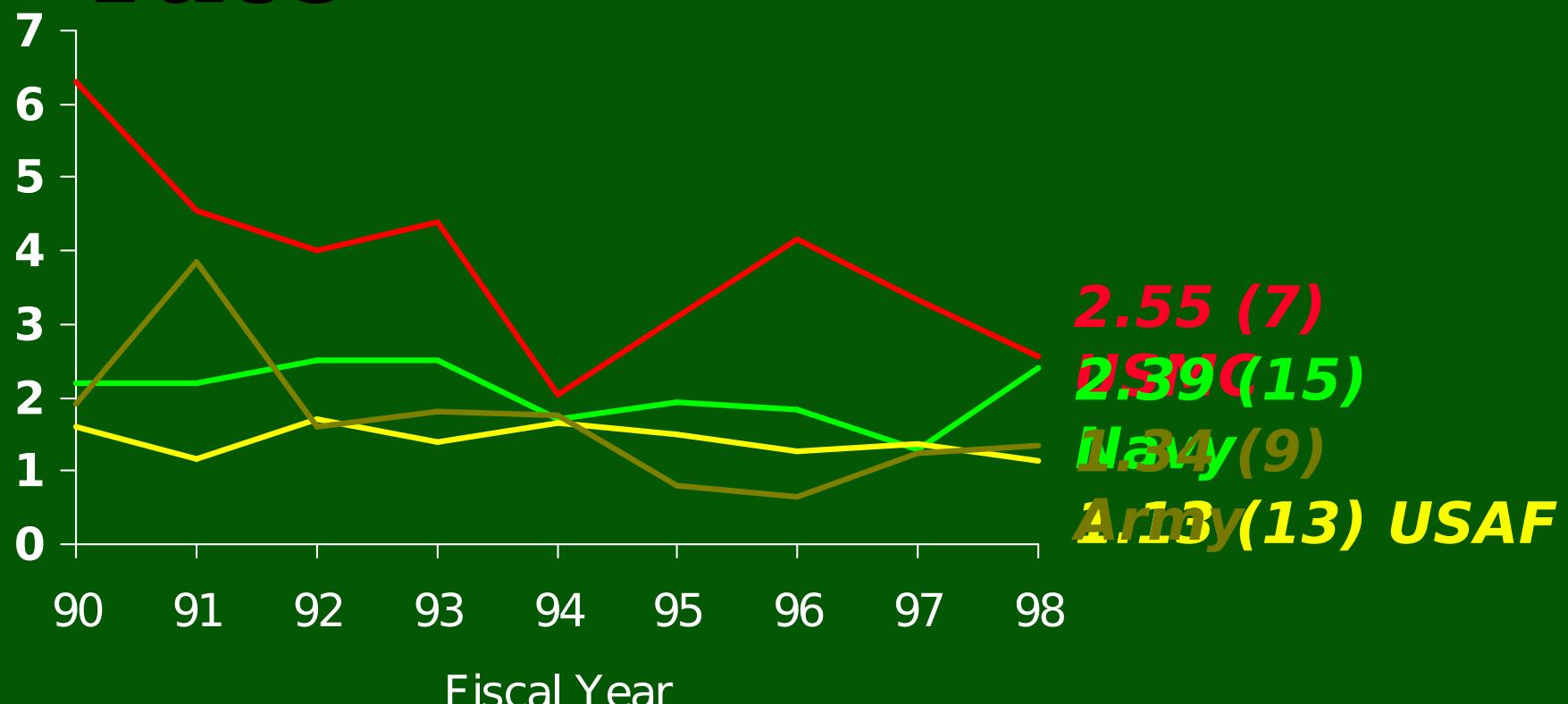
**Total:**  
**\$222**  
**Million**



6002M2

# All Services, Class A Flight Mishap

Rates  
**Marines have highest rate**

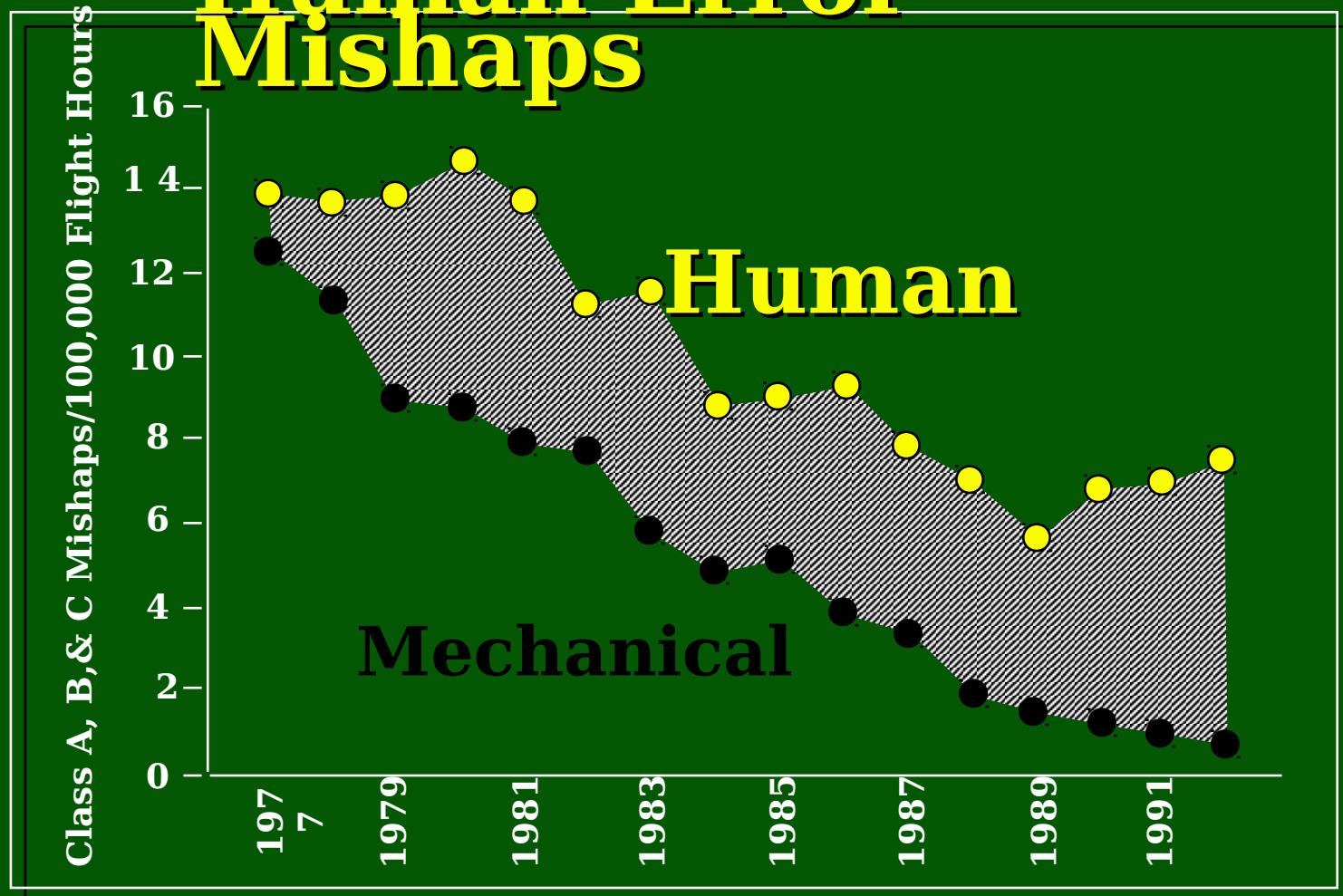


# **Human Error A Major Problem**

**4 of every 5 Navy Service  
Class A flight  
mishaps involve human  
error**



# No Steady Decrease in Human Error Mishaps



All Navy-Marine Corps Mishaps, CY 1977-92



# Accide nt

*The unplanned result of a behavior that is likely part of an organization's culture*

# Organizational Culture

*“The way we do things  
here”*

- Fundamental building blocks
  - Group values and standards
  - Medium for growth
- Shaped by leadership
- Drives key decisions**



# **Desired Cultural Attitudes**

- Accountability
- Integrity
- Focus on standards
- Continuous and open communication
- Intolerance for non-compliance
- Consistent decisions

# **ORM**

**Process ...**

**NOT Program**



# **Operational Risk Management**

- A Decision Making Tool
- Increases Ability to Make

Informed Decisions

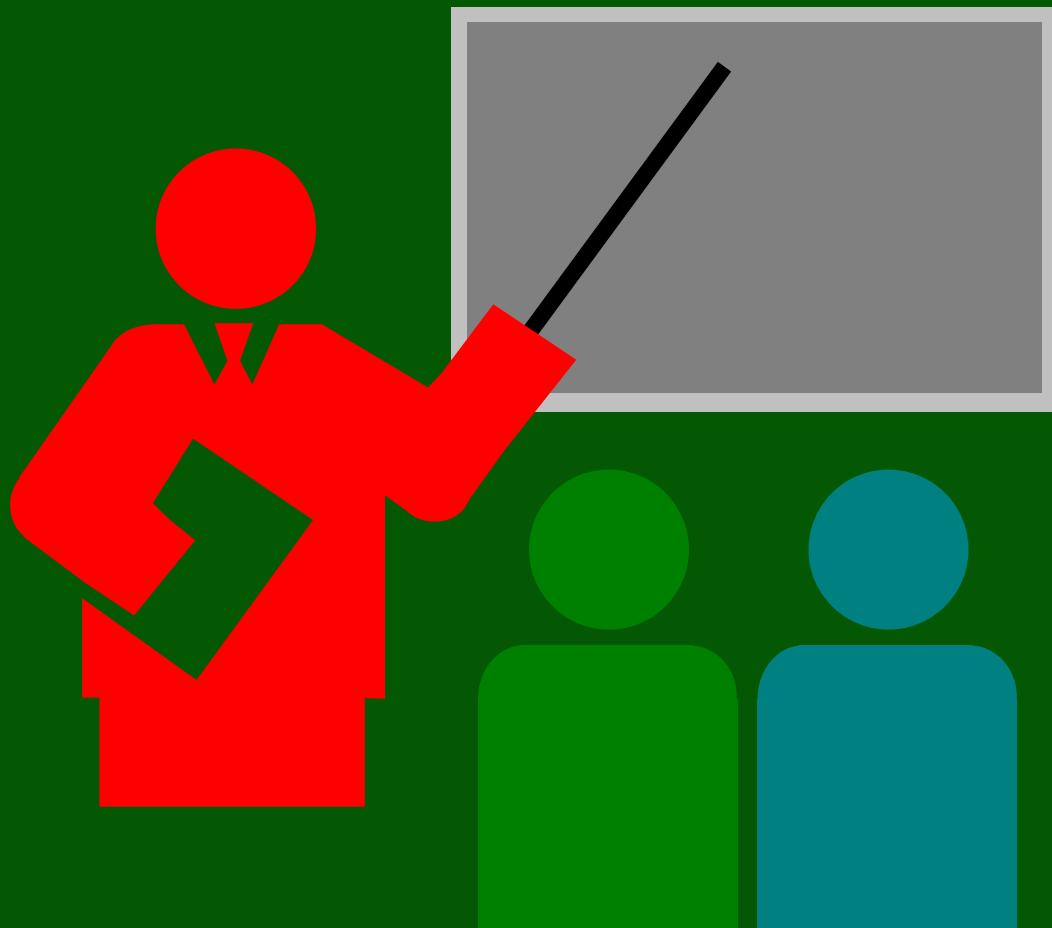
- Reduces Risks to Acceptable Levels

# **Operational Risk Management**

## **Goal:**

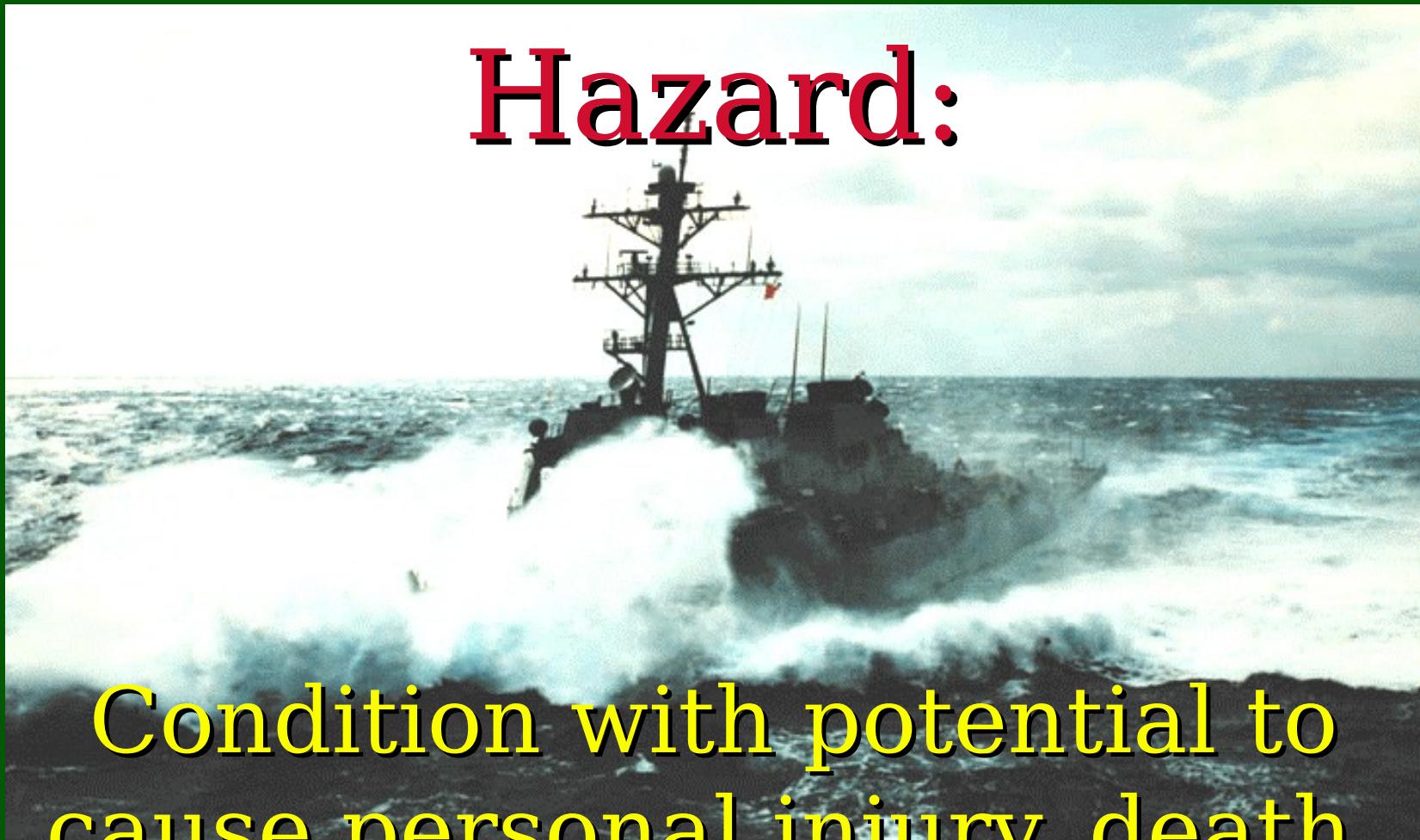
To optimize operational capability and readiness by managing risk to accomplish the mission with minimal loss.

# **ORM Terms**



# ORM Terms

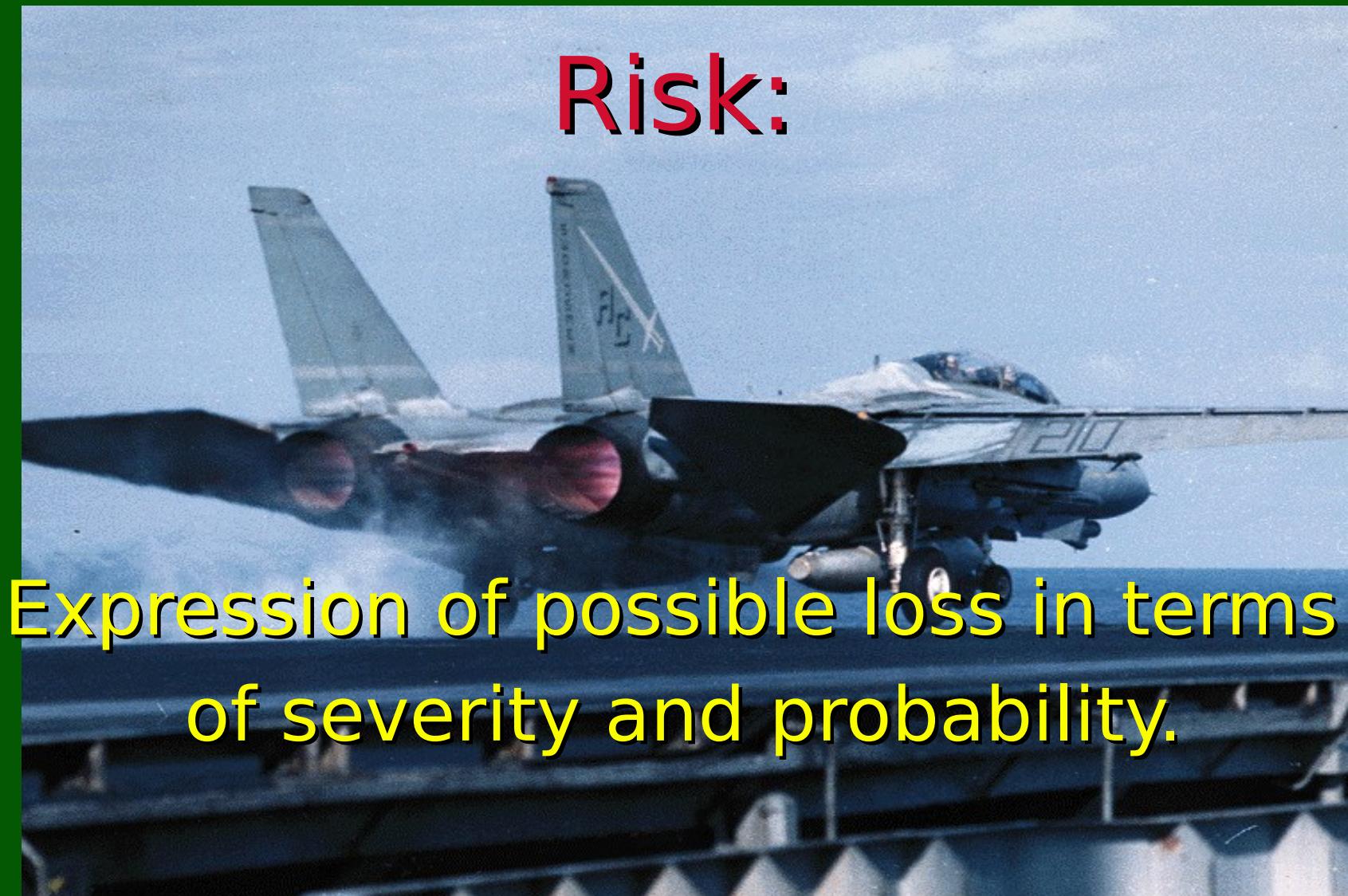
## Hazard:



Condition with potential to cause personal injury, death, property damage, or mission degradation

# ORM Terms

Risk:



Expression of possible loss in terms  
of severity and probability.

# **ORM Terms**

## **Severity:**

The worst  
consequence which can occur  
as a result of a hazard.

# ORM Terms

## Probability:

Likelihood that a hazard will result in mishap or loss.

# Hazard

Bad Weather

Flock of Birds

Walking on top  
of Slippery AC

# Risk

High Probability  
Flight Ops Cnx

Moderate Chance  
of Engine FOD

Some Chance of  
Fall Producing  
Severe Injury

# **ORM Terms**

## **Risk Assessment:**

The process of detecting hazards and assessing associated risks.

# ORM Terms

## Control:

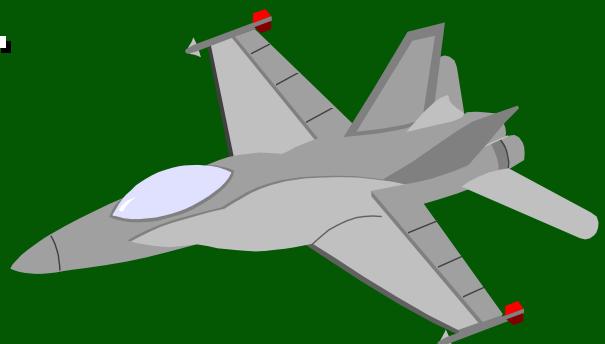
A method for reducing risk for  
an  
identified hazard by lowering  
the  
probability of occurrence  
decreasing potential severity  
or both.



# ORM Terms

## Operational Risk Management

The process of dealing with risk associated with military operations, which includes risk assessment, risk decision making, and implementation of effective risk controls.



# **Operational Risk Management Process**

1. Identify Hazards
2. Assess Hazards
3. Make Risk Decisions
4. Implement Controls
5. Supervise

# Causes of Risk

- \* Change - The “Mother” of Risk
- \* Resource Constraints
- \* New Technology
- \* Complexity
- \* Stress

# Risk

(Cont.)

- \* Human Nature
- \* High Energy Levels
- \* Societal Constraints
- \* Environmental Influences
- \* Speed/Tempo of Operation

# Four ORM Principles

1. Accept risk when benefits outweigh the cost.
2. Accept no unnecessary risk.
3. Anticipate and manage risk by planning.
4. Make risk decisions at the right level.

# ORM vs. Traditional Approach

Systematic	Random, Individual-Directed
Proactive	Reactive
Integrates All Types of Risk Into Plan	Safety As After-thought Once Plan is Done
Common Process/Terms	Non-standard
Conscious Decision “Can Do” Regardless of Risk Based on Risk vs. Benefit	

# The Benefits of ORM

- > Reduction in Mishaps
- > Improved  
Mission~~for~~iveness

# **Operational Risk Management**

## **Levels of Application**

- 1. Time-critical - On the run consideration of the 5 Step**
- 2. Deliberate - Application of the complete 5-Step Process**
- 3. In-depth - Complete 5-Step Process with Detailed Analysis**

# **ORM Implementation Concept**

- Naval Aviation Leads The Way!
- Leverage the Army's Investment in ORM
- PHASE I: JUMP START for Operational Units
- PHASE II: CNATRA/FRS/FWS Pipeline Training
- PHASE III: CNET Pipeline Training

# **ORM - Implementation Plan**

- PHASE I: Jump Start for Operations
  - Naval Safety Center “Train the Trainer” Course
  - Senior Leader Training
  - Squadron Workshop Training

# **ORM - Implementation Plan**

- PHASE II: Long Term CNATRA - FRS - Pipeline Training
  - VT/HT Flight Instructor (user/adv)
  - Student API (indoc) and VT/HT (user)
  - FRS (user)
  - FWS/Type Wing/MAW/MAG (adv)
  - CO/XO ASC course (leader)
  - Follow-on Train the Trainer School (adv/TtT)

# Why do we need ORM

- USMC & All other services decreasing in size
- Number of missions increasing
- Can not afford to sustain the losses we historically suffer during training

# **ORM IMPLEMENTATION STATUS**

**DOCTRINE:**      **Naval doctrinal Pub 1,3 &  
5 FMFM - 1**

**POLICY:**    **MCO P3500.27/OPNAVINST  
3500.39**

**TRAINING:**

- Naval Safety Center
- Naval Post Graduate School
- MAWTS - 1

# ORM UPDATE

- 5 “Train the Trainers” Courses @ **NSC**
- 39 USMC Aviators attended TTT Course
- 80% of USMC Squadrons

# ORM: WHERE ARE THE TRAINERS?

- 1st MAW: 5
- 2nd MAW: 12
- 3rd MAW: 10
- 4th MAW: 8
  - HMX-1, MAWTS-1, V-22 Test & Eval, SD

**Some trainers have already  
PCSed**

# SQUADRON ASSISTANCE RISK ASSESSMENT “SARA”

- MAGs 11, 13 & 14 have SARA prototype
- All MAWs to receive SARA
- Requires hardware & training

# Your Next Mishap . . . Who, Not



- ★ Self-discipline
- ★ Leadership
- ★ Training
- ★ Standards
- ★ Support

**“Life is tough, but it’s  
tougher if you’re  
stupid”**

Sergeant John M.  
Stryker, USMC, in  
“The Sands of  
Iwo Jima”

